

DISTRIBUTION OF LEAFHOPPERS IN SUBFAMILIES CICADELLINAE AND GYPONINAE (HOMOPTERA: CICADELLIDAE) IN WEST VIRGINIA^{1,2}

J.W. Begley, L. Butler³

ABSTRACT: A statewide survey of leafhoppers (Homoptera: Cicadellidae) conducted during 1978 and 1979, confirmed the presence of 40 species of cicadellids in the subfamilies Cicadellinae and Gyponinae. This paper represents the first systematic study of West Virginia's leafhopper fauna.

Until the present study, there have been no published surveys on leafhoppers found in West Virginia. This paper represents the first attempt to survey this state's fauna of cicadellids at the subfamily level.

The results reported herein are from a study initiated in May, 1978, with field collections made during the summers of 1978 and 1979. Sixteen species of Cicadellinae and 24 species of Gyponinae have been recorded from 45 of West Virginia's 55 counties.

The following distribution records include county, location, date collected, collector, and present disposition of the specimen(s) if other than West Virginia University.

LIST OF GENERA AND SPECIES

Subfamily CICADELLINAE

Tribe Proconiini

Genus *Paraulacizes* Young

P. irrorata (Fabricius): BERKELEY, Martinsburg, 5-VIII-77, PC, BOONE, Greenwood, 1-VI-79, LB, GILMER, Cedar Ck. S.P., 4-VII-77, LB, GRANT, Seneca Rocks, 12-X-75, PL, GREENBRIER, Jct. 39/Summit Lk. Rd., 14-VI-79, LB, HARDY, Rig., 4-VIII-79, LB, HARRISON, Shinnston, 20-IX-72, LM, JEFFERSON, 15-VI-79, CS, KANAWHA, Hershaw, 7-IX-79, LB, LINCOLN, Big Ugly P.H.A., 27-VI-79, LB, LOGAN, Chapmanville, 1-VI-79, LB, MCDOWELL, Panther S.F., 22-VI-79, LB, MINGO, Laurel Ck. P.H.F.A., 14-VI-79, LB, MONONGALIA, Morgantown, 15-IX-74, MB, OHIO, Bear Rock LK., 18-IV-78, MR, PRESTON, Reedsville, 2-IX-?. POCAHONTAS, Droop Mtn.,

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2-IX-?. RITCHIE, Harrisville, 29-V-79, LB. SUMMERS, Pipestem S.P., 26-VI-79, JB. TUCKER, Dolly Sods, 3-VIII-75, LB. WAYNE, Cabwaylingo S.F., 21-V-77, LB. WIRT, Elizabeth, 29-VII-?. WOOD, Mountwood Pk., 2-VII-79, LB. WYOMING, Kopperston, 1-VI-79, LB.

Genus *Oncometopia* Stal

O. orbona (Fabricius): GRANT, 13-VII-79, TM. GREENBRIER, Greenbrier S.F., 11-VII-76, LB. JEFFERSON, Shenandoah Jct., 9-XI-79, CS. MONONGALIA, 21-VI-?, M. PENDLETON, Brandywine Rec. Area, 23-VI-76, LB. RANDOLPH, Roaring Plains, 13-VIII-75, LB. SUMMERS, Hinton, 30-VI-?.

Genus *Draeculacephala* Ball

D. antica (Walker): BRAXTON, Kanawha Run/Sutton Lk., 20-VII-79, LB. BROOKE, Castleman Lk., 30-V-79, JB. DODDRIDGE, Jct. 50/18, 23-VII-79, LB. FAYETTE, Babcock S.P., 2-V-79, LB. GREENBRIER, Greenbrier S.F., 14-IV-77, LB. HANCOCK, Weirton, 30-V-79, JB. HARDY, Moorefield, 11-VI-79, JW. JEFFERSON, Bardane, 13-VII-79, HH. LINCOLN, Big Ugly P.H.A., 26-VII-79, LB. LOGAN, Chief Logan S.P., 18-V-79, LB. MARION, Colfax, 7-VI-78, JB. MARSHALL, Saint Joseph, 26-VIII-78, JB. MASON, McClintic Wildlife Sta., 1-VIII-78, LB. MCDOWELL, Panther S.F., 11-VIII-79, LB. MERCER, Dan Hale Reservoir, 10-V-78, JB. MINERAL, Larenim Pk., 9-VI-79, LB. MINGO, Laurel Ck. P.H.A., 12-VII-79, LB. MONONGALIA, Morgantown, 8-IX-77, JB. MONROE, Wayside, 16-VIII-77, JB. NICHOLAS, Birch River, 29-V-78, JB. OHIO, Short Creek, 30-V-79, JB. PRESTON, Reedsville, 22-V-78, JW. RALEIGH, Beaver, 1-VI-79, LB. RITCHIE, Jct. 50/74, 23-VII-79, LB. SUMMERS, Crumps Bottom, 1-VI-79, LB. TUCKER, Blackwater Falls, 22-V-79, JB. WAYNE, Cabwaylingo S.F., 22-VI-79, LB. WETZEL, Burton, 6-VI-78, JB. WOOD, Mountwood Pk., 29-V-79, LB.

D. mollipes (Say): BOONE, Fork Ck. P.H.A., 14-VI-78, LB. BRAXTON, Kanawha Run/Sutton Lk., 20-VII-79, LB. HARDY, Moorefield, 25-VII-79, JW. HARRISON, Bridgeport, 7-VI-79, CS. KANAWHA, Cabin Creek, 14-VI-79, LB. LINCOLN, Big Ugly P.H.A., 31-V-79, LB. MARION, Colfax, 1-VI-78, JB. MARSHALL, Saint Joseph, 26-VIII-78, JB. MCDOWELL, Panther S.F., 10-VIII-79, LB. MINGO, Laurel Ck. P.H.F.A., 11-VIII-79, LB. MONONGALIA, Morgantown, 28-V-78, JB. NICHOLAS, SUMMERSVILLE, 11-V-79, JB. POCAHONTAS, Watoga S.P., 21-VIII-78, JB. PRESTON, WVU Forest, 25-V-78, JB. RITCHIE, Harrisville, 2-VII-79, LB. SUMMERS, Crumps Bottom, 1-VI-79, LB. WAYNE, Cabwaylingo S.F., 9-VIII-79, LB. WOOD, Mountwood Pk., 2-VIII-79, LB. WYOMING, Hanover, 12-VIII-79, LB.

D. delongi Young & Davidson: DODDRIDGE, Jct. 50/18, 23-VII-79, LB. OHIO, Wheeling, 31-VIII-27, PM, NMNH. RITCHIE, Harrisville, 2-VII-79, LB.

D. producta (Walker): HARRISON, Bridgeport, 9-VI-79, CS. LEWIS, Jane Lew, 24-VI-78, JB. MASON, McClintic Wildlife Sta., 1-VIII-78, LB. MONONGALIA, Triune, 7-VI-79, LB.

D. portola Ball: BOONE, Low Gap, 2-IX-79, RS. CABELL, Milton, 21-VI-79, LB. HARDY, Moorefield, 25-VII-79, JW. HARRISON, Stonewood, 24-VI-78, JB. LEWIS, Jane Lew, 24-VI-78, JB. LINCOLN, Big Ugly P.H.A., 31-V-79, LB. MARION, Mannington, 24-IX-27, EB, NMNH. MARSHALL, Saint Joseph, 24-VI-78, JB. MERCER, Bluefield, 10-V-78, JB. MINERAL, Larenim Pk., 9-VII-79, LB. MINGO, Laurel Ck. P.H.F.A., 11-VIII-79, LB. MONONGALIA, Morgantown, 22-VIII-78, JB. POCAHONTAS, Thornwood, 26-VI-79, LB. SUMMERS, Sandstone Falls S.P., 8-IX-79, LB.

Genus *Tylozygus* Fieber

T. bifidus (Say): BOONE, Comfort, 27-VI-79, LB. BRAXTON, Kanawha Run/Sutton Lk., 20-VII-79, LB. DODDRIDGE, West Union, 2-VII-79, LB. GREENBRIER, Greenbrier S.F., 24-IX-77, LB. JEFFERSON, Bardane, 4-VI-79, HH. KANAWHA, Hernshaw, 7-IX-79, LB. LINCOLN, Big Ugly P.H.A., 26-VII-79, LB. LOGAN, Chief Logan S.P., 17-VIII-79, LB. MARION, Fairmont, 21-VIII-27, PM, NMNH. MARSHALL, Saint Joseph, 26-VIII-78, JB. MASON, McClintic Wildlife Sta., 26-VIII-78, LB. MERCER, Bluefield, 14-VIII-79, JWB. MINERAL, Larenim Pk., 9-VII-79, LB. MINGO, Nolan, 22-VI-79, LB. MONONGALIA, Morgantown, 3-VII-74, LB. OHIO, Middle Creek, 6-VII-76, GL. RITCHIE, Jct. 50/74, 23-VII-79, LB. SUMMERS, Crumps Bottom, 26-VI-79, LB. TUCKER, Olson Overlook, 19-VII-79, LB. WOOD, Mountwood Pk., 2-VII-79, LB.

T. geometricus (Signoret): KANAWHA, Cabin Creek, 18-V-79, LB. LINCOLN, Big Ugly P.H.A., 26-VIII-78, LB. LOGAN, Sharples, 8-IX-79, LB. MCDOWELL, Panther S.F., 10-VIII-79, LB. MINGO, Maher, 10-VIII-79, LB. TAYLOR, Tygart Lk. S.P., 1-VI-78, JB. WAYNE, Cabwaylingo S.F., 9-VIII-79, LB.

Genus *Plesiommata* Provancher

P. tripunctata (Fitch): BOONE, Peytona, 14-IX-79, LB. DODDRIDGE, West Union, 2-VII-79, LB. GREENBRIER, Greenbrier S.F., 24-IX-77, LB. LINCOLN, Big Ugly P.H.A., 27-VI-79, LB. MINGO, Laurel Ck. P.H.F.A., 11-VIII-79, LB. MONONGALIA, Morgantown, 8-IX-77, JB. PRESTON, Bruceton Mills, 27-X-79, PW. SUMMERS, Crumps Bottom, 26-VI-79, LB. WAYNE, Cabwaylingo S.F., 9-VIII-79, LB. WOOD, Mountwood Pk., 2-VII-79, LB.

Genus *Helochara* Fitch

H. communis Fitch: BROOKE, Castleman Run Lk., 18-IV-79, MR. GREENBRIER, Greenbrier S.F., 30-VII-79, LB. HARDY, Moorefield, 5-VIII-77, LB. LEWIS, Jane Lew, 24-VI-78, JB. MARION, Colfax, 1-VI-78, JB. MONONGALIA, Harris Lk., 22-V-78, JB. OHIO, Bear Rock Lk., 18-IV-79, MR. PRESTON, WVU Forest, 25-V-78, JB.

Genus *Sibovia* China

S. occatoria (Say): BOONE, Peytona, 17-VIII-79, LB. WAYNE, Cabwaylingo S.F., 9-VIII-79, LB.

Genus *Amphigonalia* Young

A. gothica (Signoret): FAYETTE, Babcock S.P., 10-VII-79, LB. MARSHALL, Saint Joseph, 26-VIII-78, JB. MINERAL, Larenim Pk., 3-VIII-79, LB. MINGO, Laurel Ck. P.H.F.A., 11-VIII-79, LB. MONONGALIA, Harris Lk., 14-IX-77, JB. OHIO, Short Creek, 20-V-79, JB. PRESTON, Terra Alta, 17-IX-77, NB. PUTNAM, Winfield, 21-VI-79, LB. RALEIGH, Beckley, 16-VI-78, DR. TUCKER, Blackwater Falls, 22-V-79, JB. WETZEL, Littleton, 30-V-79, JB.

Genus *Graphocephala* Van Duzee

G. coccinea (Forster): BERKELEY, Inwood, 21-VI-78, JW. BOONE, Peytona, 7-IX-78, LB. CABELL, Milton, 21-VI-79, LB. DODDRIDGE, West Union, 2-VII-79, LB. FAYETTE, Babcock S.P., 8-IX-78, LB. GRANT, Smoke Hole, 8-VII-79, LB. GREENBRIER, White Sulphur Springs, 9-VII-40, WR, NMNH. JEFFERSON, KEARNEYSVILLE, 7-VIII-55, KK. KANAWHA, Cabin Creek, 14-VI-79, LB. LEWIS, Jane Lew, 24-V-78, JB. LOGAN, Mallory, 13-VI-79, LB. MARION, Fairmont, 6-VI-77, TM. MCDOWELL, Panther S.F., 10-IX-77, LB. MERCER, Bluefield, 3-VII-77, JB. MINGO, Laurel Ck. P.H.F.A., 14-VI-79, LB. MONONGALIA, Morgantown, 10-VII-74, LB. PENDLETON, North Fork Mtn.,

8-VII-79, LB. POCAHONTAS, Watoga S.P., 21-VIII-78, JB. PRESTON, 18-VIII-76, LB. PUTNAM, Winfield, 21-VI-79, LB. RALEIGH, Lk. Stevens, 23-VI-79, LB. RITCHIE, Harrisville, 2-VII-79, LB. SUMMERS, Crumps Bottom, 26-VI-79, LB. TUCKER, Olson Overlook, 19-VII-79, LB. WAYNE, Cabwaylingo S.F., 10-IX-77, LB. WOOD, Parkersburg, 18-VI-75, TM. WYOMING, Glen Fork, 13-VI-79, LB.

G. versuta (Say): BOONE, Sylvester, 14-VI-79, LB. BRAXTON Kanawha Run/Sutton Lk., 20-VII-79, LB. DODDRIDGE, Jct. 50/18, 23-VII-79, LB. KANAWHA, Cabin Creek, 18-V-79, LB. LINCOLN, Big Ugly P.H.A., 26-VII-79, LB. LOGAN, Chapmanville, 1-VI-79, LB. MARSHALL, Moundsville, 9-VIII-75, GL. MCDOWELL, Panther S.F., 22-VI-79, LB. MINGO, Laurel Ck. P.H.F.A., 12-VII-79, LB. MONONGALIA, Harris Lk., 14-IX-77, JB. RALEIGH, Lk. Stevens, 8-IX-79, LB. RITCHIE, Jct. 50/74, 23-VII-79, LB. SUMMERS, Crumps Bottom, 1-VI-79, LB. WAYNE, Crum, 22-VI-79, LB. WOOD, Mountwood Pk., 2-VII-79, LB. WYOMING, Hanover, 10-VIII-79, LB.

Subfamily GYPONINAE

Genus *Rugosana* DeLong

R. querci DeLong: FAYETTE, Babcock S.P., 8-IX-78, LB. JEFFERSON Bardane, 23-VII-79, HH. MERCER, Bluefield, 14-IX-79, JWB.

Genus *Gyponana* Ball

G. scrupulosa (Spang.): MERCER, Bluefield, 9-VIII-79, JWB.

G. palma DeLong: HARRISON, East View, 12-VII-79, CS. MCDOWELL, Panther S.F., 22-VI-79, LB. MERCER, Bluefield, 13-VI-79, JWB.

G. contractura DeLong: WAYNE, Garretts Ck., 21-VI-79, LB.

G. ortha DeLong: BOONE: Low Gap, 2-IX-79, RS. LOGAN, McConnel, 13-VI-79, LB. MINGO, Laurel Ck. P.H.F.A., 12-VII-79, LB. WAYNE, Cabwaylingo S.F., 9-VIII-79, LB.

G. conspira DeLong: LINCOLN, Big Ugly P.H.A., 26-VIII-78, LB.

G. amara DeLong: MINGO, Nolan, 22-VI-79, LB.

G. parallela DeLong: MINGO, Laurel Ck. P.H.F.A., 14-VI-79, LB.

G. extenda DeLong: MERCER, Bluefield, 7-IX-79, JWB. MONONGALIA, Triune, 1-IX-79, LB. WOOD, Mountwood Pk., 21-VIII-79, LB.

G. morosita DeLong: JEFFERSON, Bardane, 11-V-79, HH. WAYNE, Cabwaylingo S.F., 9-VIII-79, LB.

G. turbina DeLong: FAYETTE, Babcock S.P., 7-VIII-79, LB. JEFFERSON, Bardane, 23-VII-79, HH. MCDOWELL, Panther S.F., 11-VIII-79, LB. MERCER, Bluefield, 9-VIII-79, JWB. WOOD, Mountwood Pk., 21-VIII-79, LB.

G. fagi DeLong: MCDOWELL, Panther S.F., 11-VIII-79, LB. MINGO, Nolan, 22-VI-79, LB.

G. gladia DeLong: MONONGALIA, Triune, 17-VII-79, LB. WAYNE, Cabwaylingo, S.F., 22-VI-79, LB.

G. tenella (Spang.): LINCOLN, Big Ugly P.H.A., 26-VIII-78, LB.

G. pingua DeLong: MCDOWELL, Panther S.F., 11-VIII-79, LB.

G. pingua DeLong: MCDOWELL, Panther S.F., 11-VIII-79, LB.

Genus *Gypona* Germar

G. melanota Spangberg: MONONGALIA, Morgantown, 28-VIII-73, RP.

Genus *Penthimia* Germar

P. americana Fitch: HANCOCK, Weirton, 30-V-79, JB. POCAHONTAS, Tea Creek Campground, 9-VIII-76, LB.

Genus *Ponana* Ball

P. scarlatina (Fitch): MORGAN, Cacapon S.P., 16-VII-79, LB.

P. puncticollis (Spangberg): TAYLOR, Tygart Lk., 1-VI-78, JB.

P. limbatipennis (Spangberg): WETZEL, Lewis Wetzel P.H.A., 3-VII-78, LB.

P. limonea Ball & Reeves: GRANT, Mt. Storm, 4-VI-78, LB. MONONGALIA, Morgantown, 10-VII-74, LB.

P. pectoralis (Spang.): LINCOLN, Big Ugly P.H.A., 31-V-79, LB. MONONGALIA, Triune, 2-VI-79, LB.

P. aenea DeLong: FAYETTE, Babcock S.P., 10-VII-79, LB. WEBSTER, Big Ditch Lk., 13-VI-79, LB.

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The various collectors of specimens examined during this study are listed below, along with the initials used in the distribution records.

Bacon, Nathan P. NB	Kessler, K.J. KK	Robinson, W. WR
Ball, E.D. EB	Lippert, George L. GL	Rowe, Deborah J. . . . DR
Bardes, M. MB	McGorran M	Stuart, Lavina C. . . . CS
Begley, Jack W. JWB	Mason, Thomas L. . . . TM	Swope, Ronny RS
Begley, Joe W. JB	Metzner, Larry LM	Wagner, William . . . WW
Butler, Linda. LB	Musgrave, Paul. PM	Wales, Paul PW
Custer, Pamela K. PC	Prevat, Ronald. RP	Weaver, Joseph E. . . . JW
Hogmire, Henry W. . . . HH	Remick, Marlin D. . . . MR	

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